

Please type a plus sign (+) inside this box → +

Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	678-1256 (P10487)
First Inventor	Vahid TAROKH
Title	APPARATUS AND METHOD FOR TRANS.....
Express Mail Label No.	EV 333229165 US

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- Fee Transmittal Form (e.g., PTO/SB/17)  
*(Submit an original and a duplicate for fee processing)*
- Applicant claims small entity status.  
*See 37 CFR 1.27.*
- Specification [Total Pages 26]  
*(Preferred arrangement set forth below)*
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
- Drawing(s) (35 U.S.C. 113) [ Total Sheets 6 ]
- Oath or Declaration [ Total Pages 6 ]
  - Newly executed (original or copy)
  - Copy from a prior application (37 CFR 1.63 (d))  
*(for continuation/divisional with Box 18 completed)*
    - DELETION OF INVENTOR(S)**  
*Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).*
- Application Data Sheet. See 37 CFR 1.76

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

Continuation     Divisional     Continuation-in-part (CIP)

of prior application No.: \_\_\_\_\_

Prior application information:

Examiner \_\_\_\_\_

Group Art Unit: \_\_\_\_\_

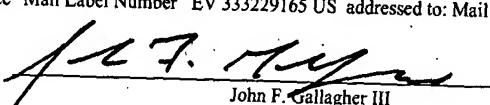
For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

<input type="checkbox"/> Customer Number or Bar Code Label:  (Insert Customer No. or Attach bar code label here)		or <input type="checkbox"/> Correspondence address below		
Name	Paul J. Farrell			
Address	DILWORTH & BARRESE, LLP 333 Earle Ovington Blvd.			
City	Uniondale	State	New York	Zip Code 11553
Country	U.S.A.	Telephone	(516) 228-8484	Fax (516) 228-8516
Name (Print/Type)	Paul J. Farrell	Registration No. (Attorney/Agent)	33,494	
Signature			Date	9/30/03

I hereby certify that this correspondence and the documents referred to as enclosed are being deposited with the United States Postal Service on date below in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV 333229165 US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 30, 2003

  
John F. Gallagher III

16235 U.S.P.T.O.  
10/674735



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# FEE TRANSMITTAL

## for FY 2003

Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 874.00)

## Complete if Known

Application Number	not yet known
Filing Date	herewith
First Named Inventor	Vahid TAROKH
Examiner Name	not yet known
Art Unit	not yet assigned
Attorney Docket No.	678-1256 (P10487)

## METHOD OF PAYMENT (check all that apply)

 Check  Credit card  Money Order  Other  None
 Deposit Account:

Deposit Account Number: 04-1121  
 Deposit Account Name: Dilworth & Barrese LLP

The Commissioner is authorized to: (check all that apply)  
 Charge fee(s) indicated below  Credit any overpayments  
 Charge any additional fee(s) during the pendency of this application  
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)		
1001 750	2001 375	Utility filing fee	750.00
1002 330	2002 165	Design filing fee	
1003 520	2003 260	Plant filing fee	
1004 750	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1) (\$ 750.00)			

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Independent Claims	Multiple Dependent	Extra Claims	Fee from below	Fee Paid
12	-20** = 0		x 0.00	= 0.00	
4	- 3** = 1		x 84.00	= 84.00	

Large Entity	Small Entity	Fee Description
Fee Code (\$)	Fee Code (\$)	
1202 18	2202 9	Claims in excess of 20
1201 84	2201 42	Independent claims in excess of 3
1203 280	2203 140	Multiple dependent claim, if not paid
1204 84	2204 42	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2) (\$ 84.00)		

\*\*or number previously paid, if greater; For Reissues, see above

## 3. ADDITIONAL FEES

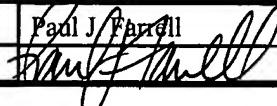
Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)		
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 410	2252 205	Extension for reply within second month	
1253 930	2253 465	Extension for reply within third month	
1254 1,450	2254 725	Extension for reply within fourth month	
1255 1,970	2255 985	Extension for reply within fifth month	
1401 320	2401 160	Notice of Appeal	
1402 320	2402 160	Filing a brief in support of an appeal	
1403 280	2403 140	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,300	2453 650	Petition to revive - unintentional	
1501 1,300	2501 650	Utility issue fee (or reissue)	
1502 470	2502 235	Design issue fee	
1503 630	2503 315	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	40
1809 750	2809 375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 750	2810 375	For each additional invention to be examined (37 CFR 1.129(b))	
1801 750	2801 375	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40.00)

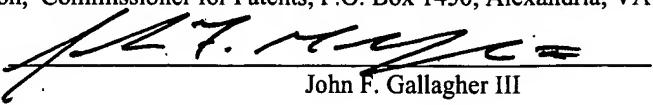
## SUBMITTED BY

Name (Print/Type)	Paul J. Farrell	Registration No. (Attorney/Agent)	33,494	Telephone	(516) 228-8484
Signature				Date	9/30/03

## CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence and the documents referred to as enclosed are being deposited with the United States Postal Service on date below in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV 333229165US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 30, 2003

  
John F. Gallagher III

PATENT  
Atty. Docket No. 678-1256 (P10487)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

UTILITY APPLICATION DATA SHEET UNDER 37 C.F.R. §1.76

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s): Vahid TAROKH, Jae-Hak CHUNG, Chan-Soo HWANG, Yung-Soo KIM

For: APPARATUS AND METHOD FOR TRANSMITTING AND RECEIVING  
SIGNALS USING MULTIPLE ANTENNAS IN MOBILE COMMUNICATION  
SYSTEMS

Enclosed are:

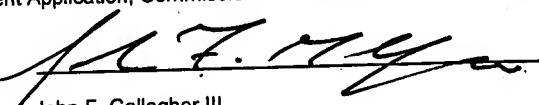
- [X] 22 page(s) of specification
- [X] 1 page(s) of Abstract
- [X] 3 page(s) of claims
- [X] 6 sheets of drawings [x] formal [ ] informal
- [X] 6 page(s) of Declaration and Power of Attorney

ASSIGNEE NAME: SAMSUNG ELECTRONICS CO., LTD.

ASSIGNEE RESIDENCE: KYUNGKI-DO, KOREA

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal Service on this date September 30, 2003 in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV 333229165 US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

  
John F. Gallagher, III

[ ] This application claims the benefit under 35 U.S.C. §119(e) of U.S.  
Provisional Application(s) No(s).:

APPLICATION NO(S).:

FILING DATE

\_\_\_\_\_  
\_\_\_\_\_

[X] Certified copy of application

<u>Country</u>	<u>Appln. No.</u>	<u>Filed</u>
Korea	59621/2002	September 30, 2002

from which priority under Title 35 United States Code, § 119 is claimed

[X] is enclosed.

[ ] will follow.

**CALCULATION OF UTILITY APPLICATION FEE**

For	Number Filed	Number Extra	Rate	Basic Fee \$750.00
TOTAL CLAIMS	12	0	x 18 =	\$0.00
INDEPENDENT CLAIMS	4	1	x 84 =	\$84.00
[ ] Multiple Dep. Claim			280	\$0.00
			<b>TOTAL \$834.00</b>	

[ ] Verified Statement of "Small Entity" Status Under 37 C.F.R. § 1.27. Reduced fees under 37 C.F.R. § 1.9(f) (50% of total) paid herewith \$.

**Atty. Docket No. 678-1256 (P10487)**

[X] The amount of \$40.00 for recording the attached Assignment is enclosed as a separate check.

[X] Check in the amount of \$834.00 to cover filing fee is attached.

[ ] Charge fee to Deposit Account No. 04-1121.  
TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

[X] Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. § 1.16 and 1.17, at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 04-1121. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 04-1121 therefor. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

Respectfully submitted,

Date: September 30, 2003



Paul J. Farrell  
Reg. No. 33,494  
Attorney for Applicant

DILWORTH & BARRESE, LLP  
333 Earle Ovington Blvd.  
Uniondale, NY 11553  
Tel. No. (516) 228-8484  
Fax. (516) 228-8516